

the listing, below the ceiling. However, when a detector is mounted on an interior wall below a sloping ceiling, it shall be located 4 inches to 12 inches below the intersection of the connecting exterior wall and the sloping ceiling (cathedral ceiling). The required detector(s) shall be attached to an electrical outlet box and the detector connected by a permanent wiring method into a general electrical circuit. There shall be no switches in the circuit to the detector between the over-current protection device protecting the branch circuit and the detector. Smoke detector(s) shall not be placed on the same branch circuit or any circuit protected by a ground fault circuit interrupter.

[49 FR 32008, Aug. 9, 1984, as amended at 58 FR 55005, Oct. 25, 1993]

§ 3280.209 Fire testing.

All fire testing conducted in accordance with this subpart shall be performed by nationally recognized testing laboratories which have expertise in fire technology. In case of dispute, the Secretary shall determine if a particular agency is qualified to perform such fire tests.

[49 FR 32011, Aug. 9, 1984]

Subpart D—Body and Frame Construction Requirements

§ 3280.301 Scope.

This subpart covers the minimum requirements for materials, products, equipment and workmanship needed to assure that the manufactured home will provide:

- (a) Structural strength and rigidity,
- (b) Protection against corrosion, decay, insects and other similar destructive forces,
- (c) Protection against hazards of windstorm,
- (d) Resistance to the elements, and
- (e) Durability and economy of maintenance.

§ 3280.302 Definitions.

The following definitions are applicable to subpart D only:

Anchoring equipment: means straps, cables, turnbuckles, and chains, including tensioning devices, which are used

with ties to secure a manufactured home to ground anchors.

Anchoring system: means a combination of ties, anchoring equipment, and ground anchors that will, when properly designed and installed, resist overturning and lateral movement of the manufactured home from wind forces.

Diagonal tie: means a tie intended to primarily resist horizontal forces, but which may also be used to resist vertical forces.

Footing: means that portion of the support system that transmits loads directly to the soil.

Ground anchor: means any device at the manufactured home stand designed to transfer manufactured home anchoring loads to the ground.

Loads: (1) *Dead load:* means the weight of all permanent construction including walls, floors, roof, partition, and fixed service equipment.

(2) *Live load:* means the weight superimposed by the use and occupancy of the manufactured home, including wind load and snow load, but not including dead load.

(3) *Wind load:* means the lateral or vertical pressure or uplift on the manufactured home due to wind blowing in any direction.

Main frame: means the structural component on which is mounted the body of the manufactured home.

Pier: means that portion of the support system between the footing and manufactured home exclusive of caps and shims.

Sheathing: means material which is applied on the exterior side of a building frame under the exterior weather resistant covering.

Stabilizing devices: means all components of the anchoring and support system such as piers, footings, ties, anchoring equipment, ground anchors, and any other equipment which supports the manufactured home and secures it to the ground.

Support system: means a combination of footings, piers, caps, and shims that will, when properly installed, support the manufactured home.

Tie: means straps, cable, or securing devices used to connect the manufactured home to ground anchors.

Vertical tie: means a tie intended to resist the uplifting or overturning forces.

[58 FR 55005, Oct. 25, 1993; 59 FR 15113, Mar. 31, 1994]

§ 3280.303 General requirements.

(a) *Minimum requirements.* The design and construction of a manufactured home shall conform with the provisions of this standard. Requirements for any size, weight, or quality of material modified by the terms of *minimum*, *not less than*, *at least*, and similar expressions are minimum standards. The manufacturer or installer may exceed these standards provided such deviation does not result in any inferior installation or defeat the purpose and intent of this standard.

(b) *Construction.* All construction methods shall be in conformance with accepted engineering practices to insure durable, livable, and safe housing and shall demonstrate acceptable workmanship reflecting journeyman quality of work of the various trades.

(c) *Structural analysis.* The strength and rigidity of the component parts and/or the integrated structure shall be determined by engineering analysis or by suitable load tests to simulate the actual loads and conditions of application that occur. (See subparts E and J.)

(d) [Reserved]

(e) *New materials and methods.* (1) Any new material or method of construction not provided for in this standard and any material or method of questioned suitability proposed for use in the manufacture of the structure shall nevertheless conform in performance to the requirements of this standard.

(2) Unless based on accepted engineering design for the use indicated, all new manufactured home materials, equipment, systems or methods of construction not provided for in this standard shall be subjected to the tests specified in paragraph (g) of this section.

(f) *Allowable design stress.* The design stresses of all materials shall conform to accepted engineering practice. The use of materials not certified as to strength or stress grade shall be limited to the minimum allowable stresses under accepted engineering practice.

(g) *Alternative test procedures.* In the absence of recognized testing procedures either in these standards or the applicable provisions of those standards incorporated by reference, the manufacturer electing this option shall develop or cause to be developed testing procedures to demonstrate the structural properties and significant characteristics of the material, assembly, subassembly component or member. Such testing procedures shall become part of the manufacturer's approved design. (Refer to § 3280.3.)

(1) Testing procedures so developed shall be submitted to the Department for approval.

(2) Upon notification of approval, the alternative test procedure is considered acceptable.

(3) Such tests shall be witnessed by an independent licensed professional engineer or architect or by a recognized testing organization. Copies of the test results shall be kept on file by the manufactured home manufacturer.

[40 FR 58752, Dec. 18, 1975. Redesignated at 44 FR 20679, Apr. 6, 1979, as amended at 58 FR 55005, Oct. 25, 1993; 59 FR 2469, Jan. 14, 1994]

§ 3280.304 Materials.

(a) Dimension and board lumber shall not exceed 19 percent moisture content at time of installation.

(b)(1) Standards for some of the generally used materials and methods of construction are listed in the following table.

Steel

Specification for Aluminum Structures Construction Manual Series—Section 1, Fifth Edition—1986, The Aluminum Association.

Specification for Structural Steel Buildings—Allowable Stress Design and Plastic Design—AISC—June 1, 1989.

The following parts of this reference standard are not applicable: 1.3.3, 1.3.4, 1.3.5, 1.3.6, 1.4.6, 1.5.1.5, 1.5.5, 1.6, 1.7, 1.8, 1.9, 1.10.4 through 1.10.7, 1.10.9, 1.11, 1.13, 1.14.5, 1.17.7 through 1.17.9, 1.19.1, 1.19.3, 1.20, 1.21, 1.23.7, 1.24, 1.25.1 through 1.25.5, 1.26.4, 2.3, 2.4, 2.8 through 2.10.

Specification for the Design of Cold-Formed Steel Structural Members—AISI—1986 Edition With 1989 Addendum.